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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Christopher Atkinson

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EXAMINER

PEREZ, ANGELICA

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,534

Applicant(s)

ATKINSON ET AL.

Examiner

Angelica M. Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11-10-2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 13-16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda (Tsunoda et al.; US Patent No.: 5,337,073 A) in view of Masahiro (Masahiro, Ouchi; JP Pub. No.: 10096890) and further in view of Cohen (Cohen et al, US Patent No.: 4,997,263).

Regarding claims 1, 14, 15, 16 and 20, Tsunoda teaches of a portable device, method, display module and display (column 1, lines 9-14; figure 6) comprising: a display comprising a front face to be viewed by a user and a reverse face (column 1, line 10; figure 6, item 24; figure 3, item 24, where item 24a is the front face and the opposite of it is the reverse face); a light detector for detecting the light incident on at least part of the display (column 1, lines 46-51; figure 6, item 82) a comparator for comparing the light detected with a given threshold (column 7, lines 22-48; where a threshold performs comparisons); and control means controlling an illuminator of illuminating the display in dependence upon an output of the comparator (column 5, lines 27-43 and column 8, lines 6-47; figure 6, item 80), where the light detector is positioned adjacent to and faces the reverse face (figure 3, item 26; where the lamp 26 is adjacent to the reverse face of the display and where it "senses illumination in terms

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of electrostatic capacity") to receive a light level that represents a total light of contributing to illumination of the display which is the sum of the light received from the illuminator and the light incident on the display (In column 5, lines 27- 43 and column 7, lines 25-30; where the control circuit reads the "resulting illumination" that could be the sum of the incident light and the light coming from the EL lamp).

Tsunoda does not specifically show where the total light corresponds to the sum of the light received from the illuminator and the light incident on the display and where the controller is arranged to control illumination of the display based on a threshold level of the sum of the light received from the illumination and light incident on the display.

In related art, concerning a display device, Masahiro teaches where the light detector is positioned to receive a light level that represents the total light contributing to display illumination which is the sum of the light received from the illuminator and the light incident on the display (abstract; "light C from a backlight 6 and the external light B from outside the device are received by the light receiving face 9a of the optical sensor 9...based on this result of the light received, the luminescence of the backlight 6 is switched to low or high luminance"; where "external light B from outside the device" corresponds to the "light incident on the display" and "backlight 6" corresponds to the "light received from the illuminator"), and where the controller is arranged to control illumination of the display based on a threshold level of the sum of the light received from the illumination and incident light (paragraphs 30, 32, 41, figures 1-3; where the external light B and backlight C are received by the optical sensor 9, the total

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luminescence is compared to a threshold by comparator 25 and the controller controls the backlight 6 brightness according to the results of the comparator) .

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda's portable radio equipment with a display back-lighting function with Masahiro's result of the "external light" and the "back light" and controlling the illumination of the display based on a threshold level of the sum of the light received from the illumination and incident light in order to prevent "the generation of the frequent changeover phenomenon of the luminance of the backlight 6 due to a slight change in the external light B", as taught by Masahiro.

Tsunoda in view of Masahiro does not specifically teach where the light is incident on the display.

In related art, concerning an ambient light illuminated liquid crystal display system, Cohen teaches where the light is incident on the display (columns 2 and 4, lines 20-50 and 3-23, respectively).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda in view of Masahiro portable radio equipment with a display back-lighting function that sums the result of the "external light" and the "back light" and controlling the illumination of the display based on a threshold level of the sum of the light received from the illumination and incident light with Cohen's light being incident on the display in order to control the contrast of the liquid crystal display as necessary, as taught by Cohen.

Regarding claim 2, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 1. In addition, Tsunoda teaches where the light detector is located behind the display, remote from the surface of the display onto which the ambient light is incident (column 1, lines 47-51, where the function of sensing the incident light is fulfilled and the condition of positioning the light detector behind the display corresponds to a designer's choice).

Regarding claim 3, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 1. Tsunoda further teaches where the controller disables the illuminator in response to an indication by the comparator that the light detected exceeds a first threshold (columns 7 and 8; lines 36-41 and 6-9, respectively).

Regarding claim 4, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 1. Tsunoda further teaches where the controller enables the illuminator in response to an indication by the comparator that the light detected is less than a second threshold (columns 7 and 8; lines 41-47 and 9-15, respectively; where the "second threshold" is the "exceeded threshold" corresponding to a "dark ambience").

Regarding claim 5, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 3. Tsunoda further teaches where the controller enables the illuminator in response to an indication by the comparator that the light detected is less than a second threshold (columns 7 and 8; lines 41-47 and 9-15, respectively).

Regarding claim 13, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 1. Tsunoda also teaches of a portable communications device such as a radiotelephone (column 1, lines 46-51, where "portable radio equipment" includes "radiotelephones").

3. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda in view of in view of Masahiro and further in view of Cohen as applied to claims 5 and 1 above, and further in view of Suzuki (Suzuki, Takaharu; US Patent No.: 6,078,302 A).

Regarding claim 6, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 5.

Tsunoda in view of in view of Masahiro and further in view of Cohen does not teach where the controller partially enables the illuminator in response to an indication by the comparator that the light detected is between the first and second thresholds.

In related art concerning screen brightness control, Suzuki teaches where the controller partially enables the illuminator in response to an indication by the comparator that the light detected is between the first and second thresholds (columns 1 and 2, lines 65-67 and 1-11, respectively; where brightness is adjusted as needed with a partial luminescence).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda in view of Masahiro and further in view of Cohen enablement/ disablement of the illuminator with Suzuki's partial enablement of the illuminator in order to provide a display with optimal brightness, as taught by Suzuki.

Regarding claim 7, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 1. Suzuki further teaches of means for determining a change in output of the light detector over a predetermined period, where the control means is arranged to disable functionality relating to the display in response to an indication that no change is determined (column 3, lines 3-7; where after an optimal brightness is detected, the detector will detect no change).

4. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda in view of Masahiro, further in view of Cohen and Suzuki, and further view of Bauer (Bauer, Harald; US Publication: 2001/0024967 A1).

Regarding claim 8, Tsunoda in view of Masahiro, further in view of Cohen and Suzuki teaches all the limitations of claim 7.

Tsunoda in view of Masahiro, further in view of Cohen and Suzuki does not teach where the controller is arranged to disable the display in response to an indication that no change is determined.

In related art concerning an energy-saving circuit based control display device, Bauer teaches where the controller is arranged to disable the display in response to an indication that no change is determined (paragraph 0014; where disablement/enablement are performed).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda, Masahiro, Cohen and Suzuki power-saving portable device with Bauer's controller arrangement to disable the display in order to save power when no change is detected.

Regarding claim 9, Tsunoda in view of Masahiro, further in view of Cohen and Suzuki teaches all the limitations of claim 7. Bauer further teaches where the controller is arranged to disable the illuminator in response to an indication that no change is determined (paragraph 0014).

5. Claims 10-12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda in view of Masahiro, further in view of Cohen and further view of in view of Bauer (Bauer, Harald; Pub. No.: 2001/0,024,967 A1).

Regarding claims 10, Tsunoda in view of Masahiro and further in view of Cohen teaches all the limitations of claim 1.

Tsunoda in view of Masahiro and further in view of Cohen does not teach where the display comprises input means responsive to a user.

In related art concerning an energy-saving circuit based control display device, Bauer teaches where the display comprises input means responsive to a user (paragraph 0006, lines 15-17; e.g., "by touching the terminal").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda' in view of Masahiro and further in view of Cohen power-saving portable device with Bauer's display comprising input means responsive to a user as another means to activate/deactivate the display.

Regarding claim 11, Tsunoda in view of Masahiro, further in view of Cohen further in view of Bauer teaches all the limitations of claim 10. Bauer further teaches where the controller controls the functionality relating to the display on the basis of settings input by the user via the input means (paragraph 0014).

Regarding claim 12, Tsunoda in view of Masahiro, further in view of Cohen and further in view of Bauer teaches all the limitations of claim 10. Bauer further teaches where the input means comprises touch means, such as a key and/or display region (paragraph 0006).

Regarding claim 22, Tsunoda in view of Masahiro, further in view of Cohen and further view of Bauer teach all the limitations of claim 12. Bauer further teaches where the touch means comprises a key (paragraph 6, lines 9-13; where it is indicated that art where touch means comprising a key, exists).

6. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda in view of Masahiro, further in view of Cohen and Bauer and, further in view of Ishihara et al. (Ishihara, US Patent No.: 6,426,736 B1).

Regarding claim 23, Tsunoda in view of Masahiro, further in view of Cohen and further view of Bauer teach all the limitations of claim 12.

Tsunoda in view of Masahiro, further in view of Cohen and Bauer does not specifically teach where the touch means comprises a display region.

In related art, concerning a portable telephone with liquid crystal display, Ishihara teaches where the touch means comprises a display region (columns 2 and 3, line 65-67 and 1-6, 38-46).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda, Masahiro, Cohen and Bauer power-saving portable device display comprising input means responsive to a user with Ishihara's

touch sensitive display in order to reduce power and provide convenience, as taught by Ishihara.

Regarding claim 24, Tsunoda in view of Masahiro, further in view of Cohen and further view of Bauer teach all the limitations of claim 12.

Tsunoda in view of Masahiro, further in view of Cohen and Bauer does not specifically teach where the touch means comprises a key and a display region.

In related art, concerning a portable telephone with liquid crystal display, Ishihara teaches where the touch means comprises a display region (columns 2 and 3, line 65-67 and 1-6, 38-46).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tsunoda, Masahiro, Cohen and Baue power-saving portable device display comprising input means responsive to a user with Ishihara's touch sensitive display in order to reduce power and provide convenience, as taught by Ishihara.

Response to Arguments

7. Applicant's arguments with respect to claims 1-16, 20 and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No.: 5,663,816, refers to a liquid crystal display device comprising reflective holographic.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 7:00 a.m. - 3:30 p.m., Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.


Angelica Perez
(Examiner)


NAY MAUNG
SUPERVISORY PATENT EXAMINER

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December 12, 2005